

SCUBA TANK MOUNTING BRACKETS

Background Of The Invention

Scuba tanks are typically mounted to a BCD by means of two mounting straps that are attached to the BCD. This requires picking up the BCD and slipping the straps attached to the BCD over the top of the scuba tank. The scuba tank is then positioned to the BCD to correct height. While attempting to secure the BCD in it's correct position, the diver tightens one scuba strap to the scuba tank and then the other. If additional diving devices are need to be attached to the scuba tank bands such as a diving light or pony tank bracket the diver must also deal with this while keeping the BCD in its proper position until the scuba tank is securely attached to the BCD. Once the BCD and tank are secured together the diver attaches the regulators to the scuba tank and diving weights to the BCD (if the BCD is weight integrated). After this the diver must strap the BCD vest on, stand in a hunched vertical position, and tighten the BCD securely for diving. Sometimes it is needful for the diver to readjust the BCD and scuba tank straps once in the water for a more secure fit.

Field Of Invention

This invention relates to a mounting plate for a BCD (buoyancy compensating device) and for a single scuba diving tank for the purpose of a quicker mounting of the scuba tank to the BCD. This will allow the diver to put on the BCD more securely with much less effort, more securely attach and detach the scuba tank to the BCD with less effort, and more quickly exchange scuba tanks for the next dive. When not diving, the diver would leave the mounting plates attached to their respective items.

Brief Description Of The Drawings

1. Fig. 1 illustrates from a top view the two plates attached together but by means of the "dove tail" mail extension and female slot and the securing Detent pin.
2. Fig. 1a illustrates the plate that mounts to the scuba tank.
3. Fig. 1b illustrates the plate that mounts to the BCD.
4. Fig 1c illustrates the scuba tank.
5. Fig 1e illustrates the Detent pin with the standard ring attached at the insert side of the hole and the other end that shows the ball bearing end of the pin. The spring-loaded ball bearing keeps the pin from sliding out.

6. Fig 2 illustrates from a top view the plate that mounts to the scuba tank.
7. Fig 2a illustrates a full-face view of the curved side of the plate that mounts to the scuba tank.
8. Fig 2b illustrates a full-face view of the plate which attaches to the scuba tank from showing the “dove tail” side of the plate. The “dove tail” extension slides from the top of the plate which mounts to the BCD in a downward vertical manner.
9. Fig 2c illustrates a side view of the plate that attaches to the scuba tank and the plate that mounts to the BCD.
10. Fig 2e & 2f illustrate the two recessed points at which the scuba tank straps secure the plate to the scuba tank.
11. Fig 3 illustrates the plate which mounts to the BCD showing the slotted “dove tail” groove that opens at the top extending down the middle near the bottom where it stops. The plate which attaches to the scuba tank fig 2 is attached to this plate by means of the extended male “dove tail” fig 2b, which slides down this slot securing the two plates together Fig 1 and further secured with the Detent pin fig 1e.
12. Fig 3b & 3c show the two counter sunk holes drilled through the plate used to secure the plate to the BCD with the 2 screws, 2 washers, and 2 threaded inserts for the screws to attach the BCD and plate.

Summary Of The Invention

The invention will allow the scuba diver to more securely and easily put on the BCD prior to attaching the scuba tank to the BCD. This eliminates approximately 40 lbs. Of additional weight the diver must lift while Attempting to stand and secure the BCD with weight, regulators, and scuba tank attached to the BCD. This will eliminate attempting to secure the scuba tank and other needed scuba gear to the BCD in the property position. The scuba tank regulators and air hoses will be more easily attached and detached to the scuba tank when not attached to the BCD.